APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,861	09/26/2001	Michael Frank	ATI.0100580	1604

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EXAMINER
DINH, NGOC V

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No. 09/963,861	Applicant(s) FRANK ET AL.
	Examiner NGOC V DINH	Art Unit 2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2004*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to Amendment filed 3/10/04.

2. Applicant's previous arguments are moot with regard to claims 1-28 in view of the new rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-27 are rejected under 35 U.S.C.102 (e) as being anticipated by Bormann PN 6,625,707.

3. As per claim 1:

Bormann teaches a method comprising the steps of:

Receiving a first request to access data from a first memory device; preparing the first request for the data for access through the first memory device [e.g., preparing a main memory read request, abstract]; providing a second request to access the data from a second memory device [e.g., performing a cache lookup, abstract], wherein the second request is provided concurrently with the step of preparing the first request [col. 1, lines 30-35;col. 2, lines 5-25; col. 4, lines 28-45]. Bormann further teaches terminating the first request [col. 3, lines 35-50; col. 6, lines 1-5]

Implicitly, Bormann teaches receiving a first notification that the data associated with the first request is available from the second memory device [e.g., if the higher level cache lookup was successful, then the main memory read command is canceled, col. 3, lines 8-10; col. 3, lines 43-47]. This is because when requests are sent to both main memory and cache concurrently for data, and if data is found in the cache then the cache must notify the memory controller that it has the valid data. Meanwhile, the main memory read command must be terminated to prevent it from being a pending request thus waist of memory space. In order to

terminate the main memory request, the system must have some type of communication to notify the memory controller that the main memory read command is no longer valid and it must be terminated. Bormann teaches terminating the first request [e.g., caceling the main memory read command, col. 5, lines 40-45], therefore Bormann implicitly teaches the notification step.

4. As per claims 2-11:

With respect to claim 2, Bormann teaches terminating the first request in a memory controller before the first request is sent to the first memory device [col. 2, lines 45-51]. With respect to claim 3, Bormann teaches terminating first request includes terminating data received from the first memory device, wherein the data is associated with the first request [col. 3, lines 35-40].

With respect to claim 4, Bormann further teaches the data is terminated in a memory controller [col. 3, lines 35-45].

With respect to claim 5, Bormann inherently teaches the data in the second memory is coherent with the data in the first memory. This is because when a request is sent to a bus, all other caches will snoope the bus to verify if their data are coherent with main memory data before they sent the data to the requestor.

With respect to claim 6-7, Bormann teaches the first memory device is a RAM; the second memory includes cache memory [col. 2, lines 5-25].

With respect to claims 8-10, Bormann teaches a memory controller associated with the first memory device terminates the memory request in response to the termination; the first request is generated by a client on a system bus; the memory request includes a multi targets memory request [col. 3, lines 35-45; col. 3, lines 1-5; col. col. 5, lines 40-45; col. 5, lines 58-65].

With respect to claim 11, Bormann inherently teaches providing the second request to a bus interface unit, wherein the bus interface unit is coupled to the second memory device. This is because interface unit is a well known logic circuit for providing connection between CPU and memory for exchanging information.

5. As per claims 12-18:

Claims 12-18 are rejected as the same reason as set forth in claims 1-11 due to the same scope.

6. As per claims 19-28:

Claims 1-18 basically are the operating steps that are carried out by the corresponding elements in claims 19-28. Accordingly, claims 19-28 are rejected for the same reasons as set forth in claims 1-18.
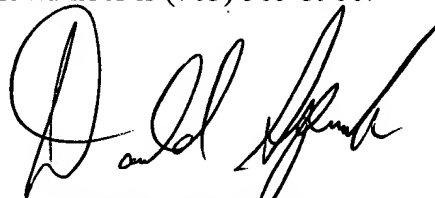
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc Dinh whose telephone number is (703) 305-3023. The examiner can normally be reached on Monday-Friday 8:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A. Sparks, can be reached on (703) 308-1756. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

NGOC DINH

Patent Examiner

ART UNIT 2187

April 29, 2004

DONALD SPARKS

Supervisory Patent Examiner

Technology Center 2100